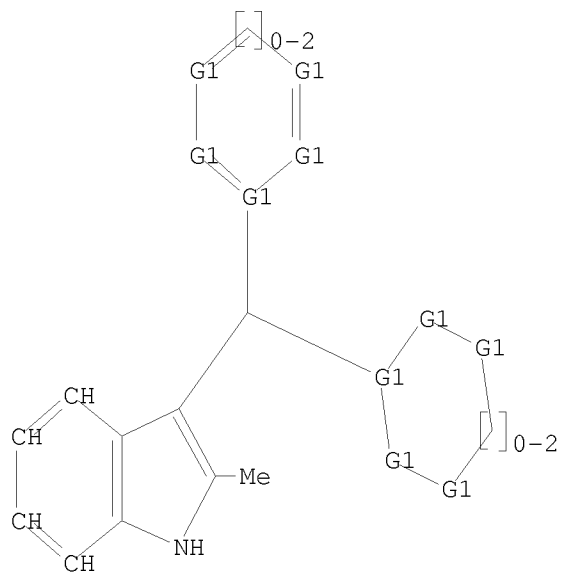


L10 STRUCTURE UPLOADED

=> d

L10 HAS NO ANSWERS

L10 STR



G1 C,O,S,N,CH₂,CH,NH

Structure attributes must be viewed using STN Express query preparation.

=> s l10 ful

FULL SEARCH INITIATED 12:00:06 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 520197 TO ITERATE

100.0% PROCESSED 520197 ITERATIONS

73 ANSWERS

SEARCH TIME: 00.00.02

L11 73 SEA SSS FUL L10

=> d l11 1-10

L11 ANSWER 1 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN

RN 1033757-78-6 REGISTRY

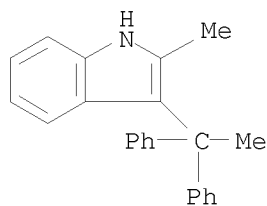
ED Entered STN: 11 Jul 2008

CN 1H-Indole, 3-(1,1-diphenylethyl)-2-methyl- (CA INDEX NAME)

MF C23 H21 N

SR CA

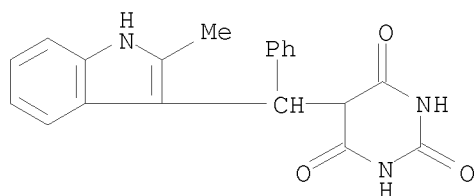
LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

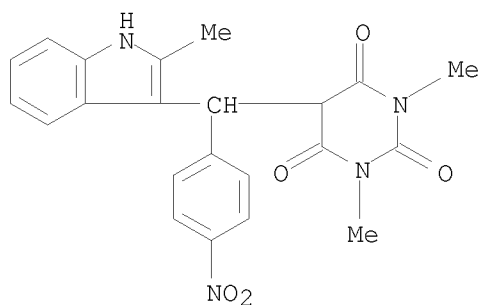
L11 ANSWER 2 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
RN 934838-45-6 REGISTRY
ED Entered STN: 16 May 2007
CN 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-[(2-methyl-1H-indol-3-yl)phenylmethyl]-
(CA INDEX NAME)
MF C20 H17 N3 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

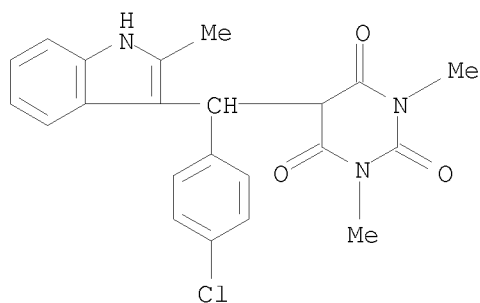
L11 ANSWER 3 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
RN 934838-42-3 REGISTRY
ED Entered STN: 16 May 2007
CN 2,4,6(1H,3H,5H)-Pyrimidinetrione, 1,3-dimethyl-5-[(2-methyl-1H-indol-3-yl)(4-nitrophenyl)methyl]- (CA INDEX NAME)
MF C22 H20 N4 O5
SR CA
LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

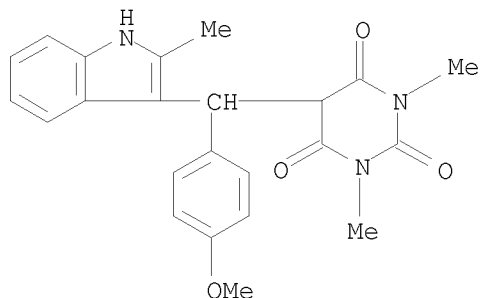
L11 ANSWER 4 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
RN 934838-41-2 REGISTRY
ED Entered STN: 16 May 2007
CN 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-[(4-chlorophenyl)(2-methyl-1H-indol-3-yl)methyl]-1,3-dimethyl- (CA INDEX NAME)
MF C22 H20 Cl N3 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

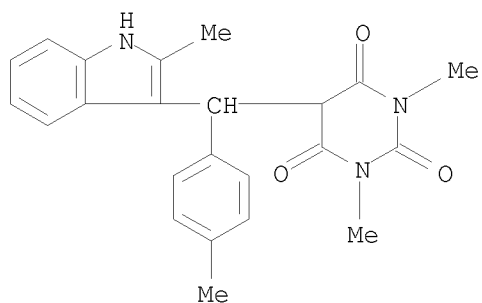
L11 ANSWER 5 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
RN 934838-40-1 REGISTRY
ED Entered STN: 16 May 2007
CN 2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-[(4-methoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]-1,3-dimethyl- (CA INDEX NAME)
MF C23 H23 N3 O4
SR CA
LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

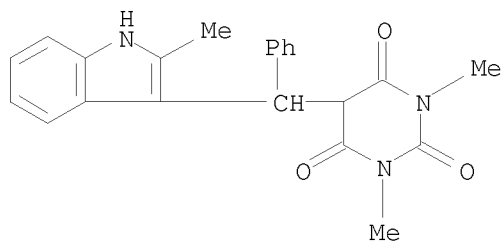
L11 ANSWER 6 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
RN 934838-39-8 REGISTRY
ED Entered STN: 16 May 2007
CN 2,4,6(1H,3H,5H)-Pyrimidinetrione, 1,3-dimethyl-5-[(2-methyl-1H-indol-3-yl)(4-methylphenyl)methyl]- (CA INDEX NAME)
MF C23 H23 N3 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

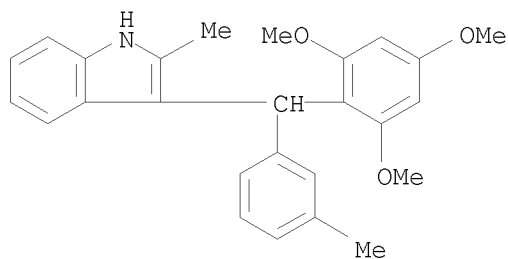
L11 ANSWER 7 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
RN 934838-38-7 REGISTRY
ED Entered STN: 16 May 2007
CN 2,4,6(1H,3H,5H)-Pyrimidinetrione, 1,3-dimethyl-5-[(2-methyl-1H-indol-3-yl)phenylmethyl]- (CA INDEX NAME)
MF C22 H21 N3 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

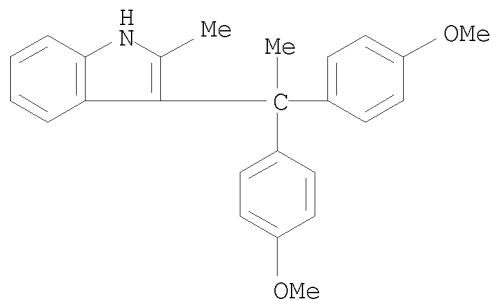
L11 ANSWER 8 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
RN 880470-23-5 REGISTRY
ED Entered STN: 14 Apr 2006
CN 1H-Indole, 2-methyl-3-[(3-methylphenyl)(2,4,6-trimethoxyphenyl)methyl]-
(CA INDEX NAME)
MF C26 H27 N O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

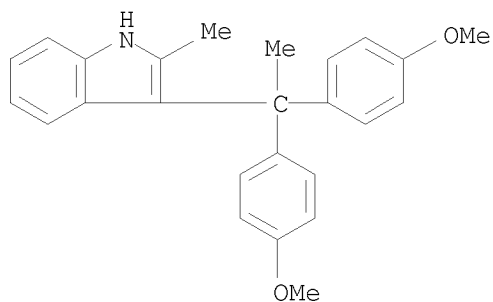
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L11 ANSWER 9 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
RN 855120-69-3 REGISTRY
ED Entered STN: 14 Jul 2005
CN 1H-Indole, 3-[1,1-bis(4-methoxyphenyl)ethyl]-2-methyl- (CA INDEX NAME)
MF C25 H25 N O2
CI COM
SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L11 ANSWER 10 OF 73 REGISTRY COPYRIGHT 2009 ACS on STN
 RN 854829-94-0 REGISTRY
 ED Entered STN: 13 Jul 2005
 CN 1H-Indole, 3-[1,1-bis(4-methoxyphenyl)ethyl]-2-methyl-, chloride (1:1)
 (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Carbonium, [bis(p-methoxyphenyl)(2-methyl-3-indolyl)methyl]-, chloride
 (5CI)
 MF C25 H25 N O2 . Cl
 SR CAS EARLY REGISTRATIONS
 LC STN Files: CA, CAPLUS
 CRN (855120-69-3)



● Cl⁻

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus
 COST IN U.S. DOLLARS
 FULL ESTIMATED COST

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 392.26 | 996.54 |

FILE 'CAPLUS' ENTERED AT 12:00:21 ON 30 SEP 2009
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FILE COVERS 1907 - 30 Sep 2009 VOL 151 ISS 14
FILE LAST UPDATED: 29 Sep 2009 (20090929/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

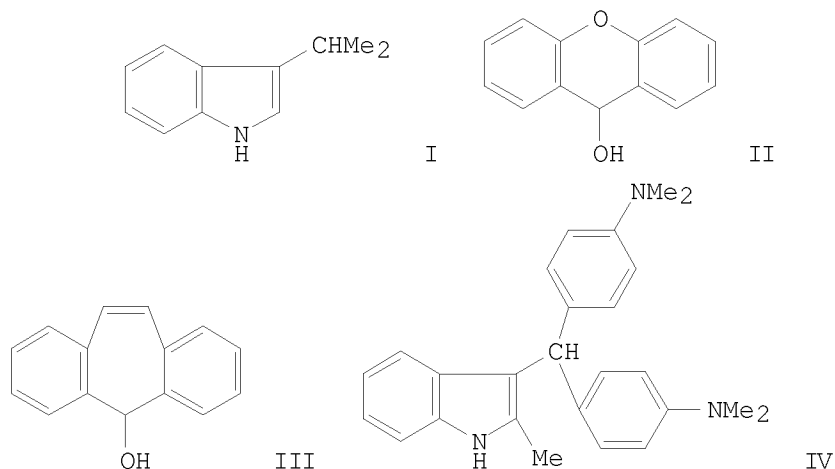
The ALL, BIB, MAX, and STD display formats in the CA/CAPLUS family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 9.

=> s l11

L12 31 L11

=> d l12 16-31 ibib abs hitstr

L12 ANSWER 16 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1989:173032 CAPLUS <<LOGINID::20090930>>
DOCUMENT NUMBER: 110:173032
ORIGINAL REFERENCE NO.: 110:28697a,28700a
TITLE: Regioselective proton-catalyzed diarylmethylation of
 indoles with 9H-xanthidrol, dibenzosuberanol, and
 bis(4-dimethylaminophenyl)methanol
AUTHOR(S): Pindur, Ulf; Deschner, Rainer
CORPORATE SOURCE: Fac. Chem. Pharm., Univ. Mainz, Mainz, D-6500/1, Fed.
 Rep. Ger.
SOURCE: Journal of Heterocyclic Chemistry (1988), 25(4),
 1199-203
 CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:173032
GI



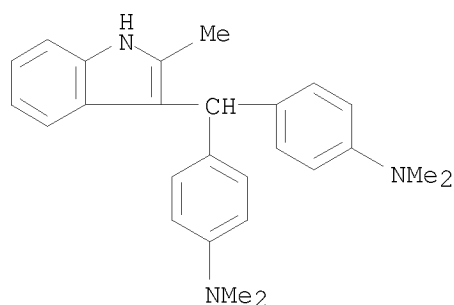
AB 3-Isopropylindole (I) is xanthylenated both at N(1) (stereocontrolled major reaction), C(2), and on the Ph nucleus of the indole skeleton by xanthydroxol (II). Other carbinols such as dibenzosuberone (III) and (4-Me₂NC₆H₄)₂CHOH with lower electrophilic SN1 activities than II do not react with I, but do react very selectively with simple methylindoles to form diarylmethylated derivs., e.g. IV.

IT 88103-98-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 88103-98-4 CAPLUS

CN Benzenamine, 4,4'-[(2-methyl-1H-indol-3-yl)methylene]bis[N,N-dimethyl-
(CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

L12 ANSWER 17 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1986:442587 CAPLUS <<LOGINID::20090930>>

DOCUMENT NUMBER: 105:42587

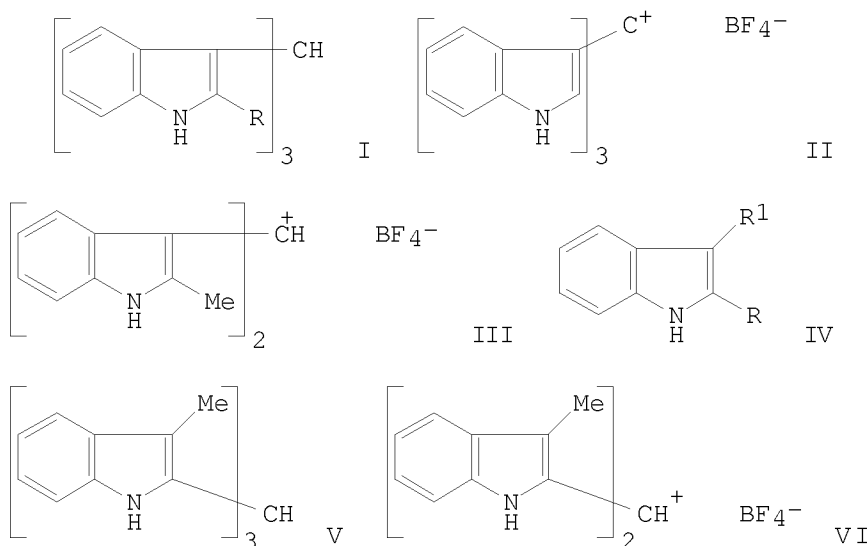
ORIGINAL REFERENCE NO.: 105:7049a,7052a

TITLE: Reaction of C3 symmetrical triindolylmethanes with
trityl tetrafluoroborate. An indication of an
electron-transfer mechanism

AUTHOR(S): Pindur, Ulf; Mueller, Johann

CORPORATE SOURCE: Inst. Pharm. Lebensmittelchem., Univ. Wuerzburg,

SOURCE: Wuerzburg, D-8700, Fed. Rep. Ger.
Chemiker-Zeitung (1985), 109(7-8), 265-7
CODEN: CMKZAT; ISSN: 0009-2894
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 105:42587
GI



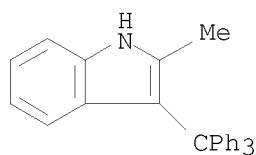
AB Triindolylmethane (I) (R = H) reacted with $\text{Ph}_3\text{C}^+ \text{BF}_4^-$ to give the dehydrogenation product II and Ph_3CH . I (R = Me) and $\text{Ph}_3\text{C}^+ \text{BF}_4^-$ gave the diindolylcarbenium tetrafluoroborate III and indole IV (R = Me, $\text{R}_1 = \text{Ph}_3\text{C}$). The triindolylmethane V and $\text{PhC}^+ \text{BF}_4^-$ gave the diindolylcarbenium tetrafluoroborate VI and IV (R = Ph_3C , $\text{R}_1 = \text{Me}$). An electron transfer mechanism was proposed.

IT 63170-99-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 63170-99-0 CAPLUS

CN 1H-Indole, 2-methyl-3-(triphenylmethyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

L12 ANSWER 18 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1984:15383 CAPLUS <<LOGINID::20090930>>

DOCUMENT NUMBER: 100:15383

ORIGINAL REFERENCE NO.: 100:2355a,2358a

TITLE: Carbonless duplicating and marking systems

INVENTOR(S): Schmidt, Paul J.; Hung, William M.
 PATENT ASSIGNEE(S): Sterling Drug Inc., USA
 SOURCE: U.S., 21 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| US 4403791 | A | 19830913 | US 1981-290657 | 19810806 |
| US 4558137 | A | 19851210 | US 1983-501309 | 19830606 |
| US 4697018 | A | 19870929 | US 1985-781589 | 19850930 |
| PRIORITY APPLN. INFO.: | | | US 1981-290657 | A3 19810806 |

OTHER SOURCE(S): CASREACT 100:15383; MARPAT 100:15383

AB Color formers for pressure-sensitive copying and thermal marking systems comprise [bis(substituted-aryl)(indolyl)]methanes and [(substituted-aryl)(heteryl)(indolyl)]methanes prepared by reacting methane derivs. with indole derivs. in the presence of either an alkaline or an acidic catalyst. Thus, a paper support was coated with a mixture containing [bis(4-dimethylaminophenyl)(1-ethyl-2-methylindol-3-yl)]methane, poly(vinyl alc.), bisphenol A, and H₂O and dried. The coated side of the paper was recorded with a stylus heated to .apprx.125° to give a violet-color image.

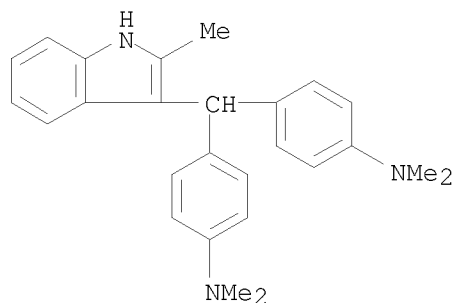
IT 88103-98-4P 88123-50-6P

RL: PREP (Preparation)

(preparation of, for pressure copying and thermal marking systems)

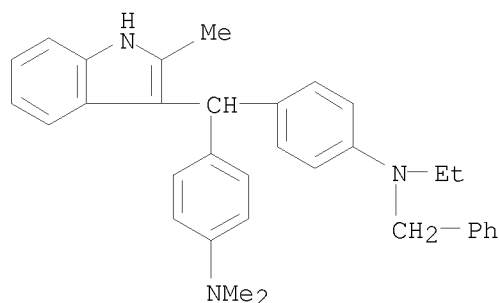
RN 88103-98-4 CAPLUS

CN Benzenamine, 4,4'-[(2-methyl-1H-indol-3-yl)methylene]bis[N,N-dimethyl-
 (CA INDEX NAME)



RN 88123-50-6 CAPLUS

CN Benzenemethanamine, N-[4-[[4-(dimethylamino)phenyl](2-methyl-1H-indol-3-yl)methyl]phenyl]-N-ethyl- (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 19 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1981:130392 CAPLUS <<LOGINID::20090930>>

DOCUMENT NUMBER: 94:130392

ORIGINAL REFERENCE NO.: 94:21173a, 21176a

TITLE: Pressure- and heat-sensitive recording material

INVENTOR(S): Psaar, Hubertus; Kuehlthau, Hans Peter; Raue, Roderich

PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 17 pp.

CODEN: GWXXBX

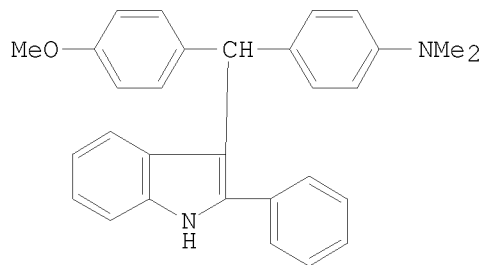
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------|------|----------|-----------------|------------|
| ----- | ---- | ----- | ----- | ----- |
| DE 2917271 | A1 | 19801106 | DE 1979-2917271 | 19790427 |
| EP 18537 | A1 | 19801112 | EP 1980-102010 | 19800415 |
| R: BE, CH, DE, FR, GB, IT | | | | |
| JP 55144193 | A | 19801110 | JP 1980-53688 | 19800424 |
| PRIORITY APPLN. INFO.: | | | DE 1979-2917271 | A 19790427 |
| GI | | | | |

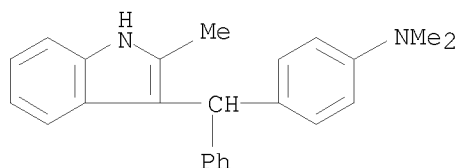


I

AB The (4-aminophenyl)(indol-3-yl)phenylmethane compds. (CA 70:88823z) serve as dye precursors yielding various light-fast shades depending on their substituents, in contact with acid coreagents. They are preferably coated as 10-35% dispersions of 10 μ microcapsules with diisocyanatediamine walls (CA 82:17846w), tempered for 2 h at 60-70°, at 4-8 g/m² on 40-100 g/m² paper as donor sheets. Thus, a 50 g/m² paper coated with microcapsules containing I as leuco dye in contact with an acid-clay-coated

com. receptor sheet yielded typewritten copies which in 24 h turned deep black due to light action.

IT 25981-15-1
RL: USES (Uses)
(pressure sensitive copying paper containing microencapsulated, as dye precursor)
RN 25981-15-1 CAPLUS
CN Benzenamine, N,N-dimethyl-4-[(2-methyl-1H-indol-3-yl)phenylmethyl]- (CA INDEX NAME)

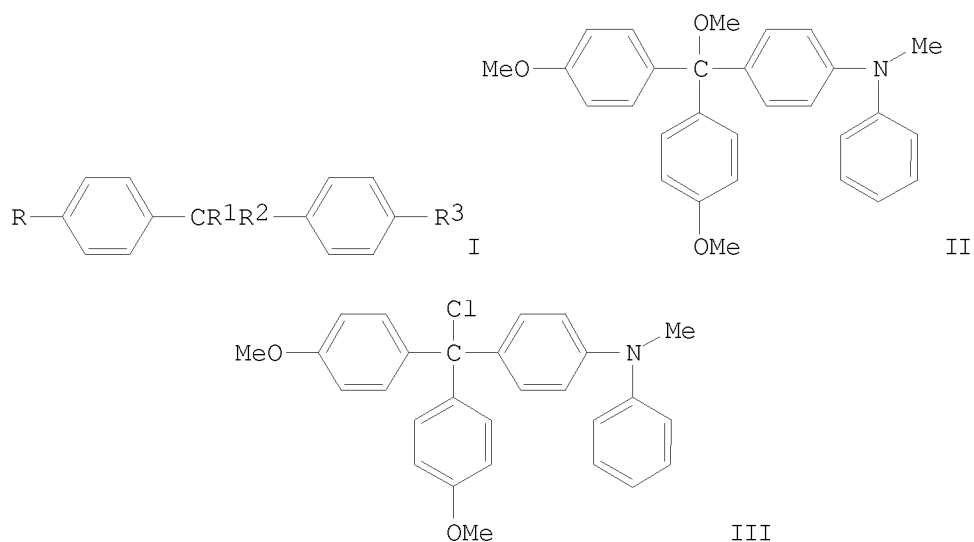


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L12 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1979:584933 CAPLUS <<LOGINID::20090930>>
DOCUMENT NUMBER: 91:184933
ORIGINAL REFERENCE NO.: 91:29661a,29664a
TITLE: Pressure- and heat-sensitive recording material
INVENTOR(S): Kuehlthau, Hans Peter; Psaar, Hubertus; Raue, Roderich
PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 33 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| ----- | ---- | ----- | ----- | ----- |
| DE 2750283 | A1 | 19790517 | DE 1977-2750283 | 19771110 |
| DE 2750283 | C2 | 19850822 | | |
| GB 2011634 | A | 19790711 | GB 1978-43272 | 19781106 |
| GB 2011634 | B | 19820407 | | |
| JP 54076317 | A | 19790618 | JP 1978-136851 | 19781108 |
| JP 61013999 | B | 19860416 | | |
| US 4211436 | A | 19800708 | US 1978-958609 | 19781108 |
| FR 2408465 | A1 | 19790608 | FR 1978-31932 | 19781110 |
| FR 2408465 | B1 | 19850208 | | |
| CH 640784 | A5 | 19840131 | CH 1978-11611 | 19781110 |
| PRIORITY APPLN. INFO.: | | | DE 1977-2750283 | A 19771110 |

GI



AB Color-forming compds. suitable for microcapsule dispersions in pressure- and heat-sensitive imaging materials have the formula I (R = H or NH₂-free nonionic group; R₁ = OH, alkylamino, dialkylamino, acylamino, aralkylamino, arylamino, saturated heterocycle, alkoxyl, aralkoxy, cycloalkoxy, aryloxy, or acyloxy; R₂ = NH₂-free aryl or heterocycle; and R₃ = OH, alkoxy, aralkoxy, alkenyloxy, cycloalkoxy, aryloxy, alkylthio, arylthio, or NR₄R₅ with R₄ ≠ R₅ = H, alkyl, aralkyl, cycloalkyl, or aryl or R₄ and R₅ together form a ring with the N or R₅ attached to the parent ring at the ortho position). Thus, in preparation of II, a solution of

III

100 g in MeOH 250 mL was added to a solution of NaOMe 12.2 g in MeOH 500 mL, the MeOH separated, and II dried in vacuum. In the preparation of a pressure-sensitive imaging paper, II 2 g was dissolved in chlorinated biphenyl 48 g at 60-70°, the solution was cooled to 50° and added to a 50° solution of gelatin 7.5 g in H₂O 60 g, the solution was emulsified, the emulsion at 40° was mixed with a 40° solution of gum arabic 7.5 g in H₂O 60 g, the pH was adjusted with NaOH to .apprx.7, the mixture was thinned at 35-40° with H₂O 190 g, a 2% aqueous solution of Mowiol 26/88 (polyvinyl alc., Hoechst AG) 50 g was added, the pH was adjusted to 5.2 with 10% aqueous HOAc, the mixture was cooled during stirring for 30-45 min to 20°, and then cooled to 5-10°, glutaraldehyde 5 g was added followed by stirring for several h, and the microcapsules were isolated and coated on a paper support which in combination with an acceptor paper gave on typing a red-violet image.

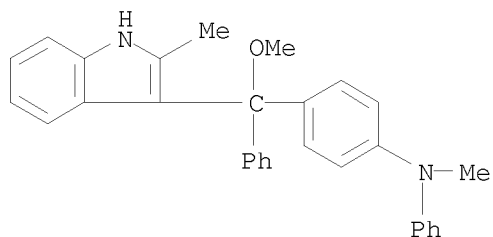
IT 71529-63-0 71529-73-2 71529-82-3
71530-12-6 71530-14-8 71530-25-1

RL: USES (Uses)

(color former, for pressure-sensitive copying papers)

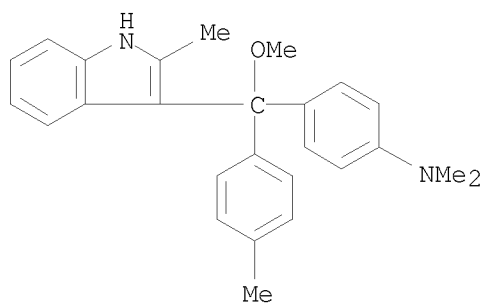
RN 71529-63-0 CAPLUS

CN Benzenamine, 4-[methoxy(2-methyl-1H-indol-3-yl)phenylmethyl]-N-methyl-N-phenyl- (CA INDEX NAME)



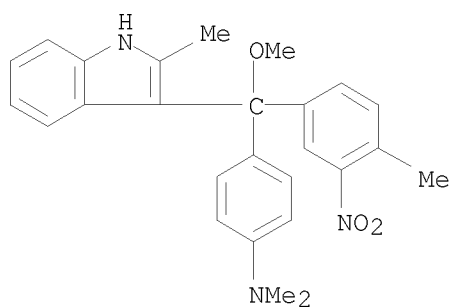
RN 71529-73-2 CAPLUS

CN Benzenamine, 4-[methoxy(2-methyl-1H-indol-3-yl)(4-methylphenyl)methyl]-N,N-dimethyl- (CA INDEX NAME)



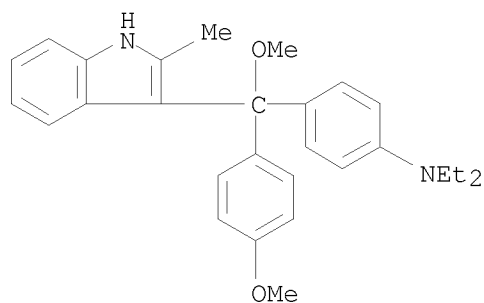
RN 71529-82-3 CAPLUS

CN Benzenamine, 4-[methoxy(2-methyl-1H-indol-3-yl)(4-methyl-3-nitrophenyl)methyl]-N,N-dimethyl- (CA INDEX NAME)



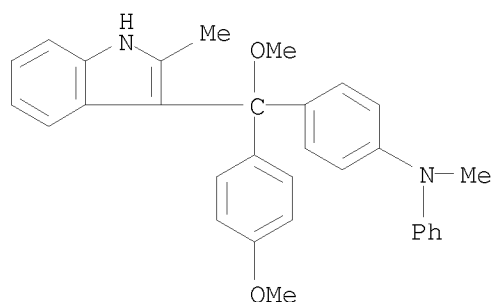
RN 71530-12-6 CAPLUS

CN Benzenamine, N,N-diethyl-4-[methoxy(4-methoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]- (CA INDEX NAME)



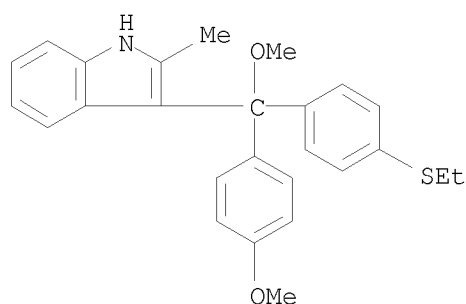
RN 71530-14-8 CAPLUS

CN Benzenamine, 4-[methoxy(4-methoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]-N-methyl-N-phenyl- (CA INDEX NAME)



RN 71530-25-1 CAPLUS

CN 1H-Indole, 3-[[4-(ethylthio)phenyl]methoxy(4-methoxyphenyl)methyl]-2-methyl- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L12 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1978:192736 CAPLUS <<LOGINID::20090930>>

DOCUMENT NUMBER: 88:192736

ORIGINAL REFERENCE NO.: 88:30317a,30320a

TITLE: Studies on phthalide derivatives. II. Synthesis of triarylmethane derivatives by the reaction of

3-phenyl-6-dimethylaminophthalides with anilines or
indoles

AUTHOR(S): Kondo, Mitsuru; Yasui, Kiyoshi; Miyake, Makoto;
Shiraishi, Tetsuo; Iwasaki, Hiroshi

CORPORATE SOURCE: Res. Lab., Kanzaki Pap. Mfg. Co., Ltd., Amagasaki,
Japan

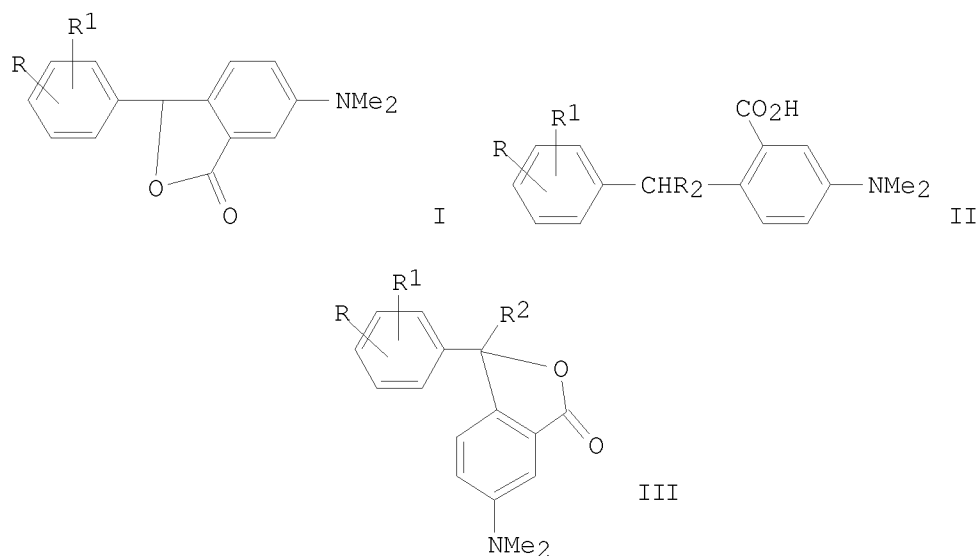
SOURCE: Nippon Kagaku Kaishi (1978), (2), 276-9
CODEN: NKAKB8; ISSN: 0369-4577

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

OTHER SOURCE(S): CASREACT 88:192736

GI

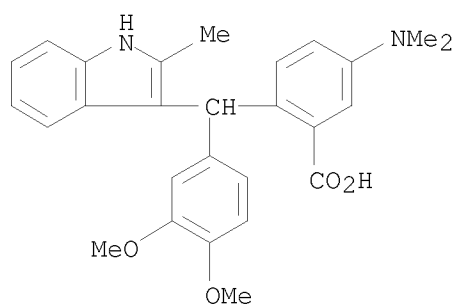


AB The Friedel-Crafts reaction of I (R = NMe₂, MeO, Me; R₁ = H, MeO) with
anilines and indoles gives II [R, R₁ as defined in I; R₂ = p-Me₂NC₆H₄,
2,4-Me(Et₂N)C₆H₃, 2-methyl-3-indolyl, 2-phenyl-3-indolyl] and oxidation gives
III (R-R₂ defined as in II), which are useful as color formers in
pressure-sensitive copying paper. A mechanism of reaction of I (R =
4-Me₂N, R₁ = H) [57515-95-4] with PhNMe₂ [121-69-7] was discussed.

IT 62632-71-7P 62632-82-0P 62632-84-2P
66481-10-5P 66481-11-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and oxidation of)

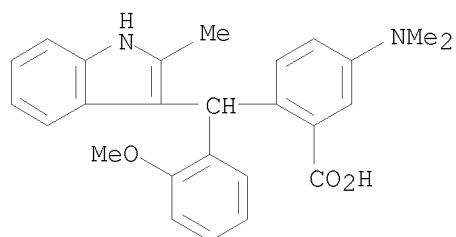
RN 62632-71-7 CAPLUS

CN Benzoic acid, 2-[(3,4-dimethoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]-5-
(dimethylamino)- (CA INDEX NAME)



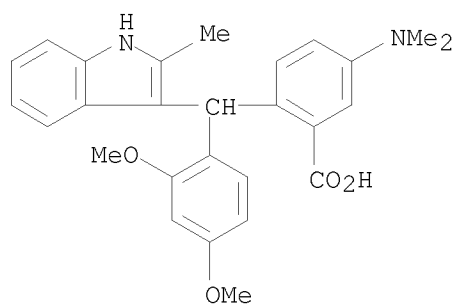
RN 62632-82-0 CAPLUS

CN Benzoic acid, 5-(dimethylamino)-2-[(2-methoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]- (CA INDEX NAME)



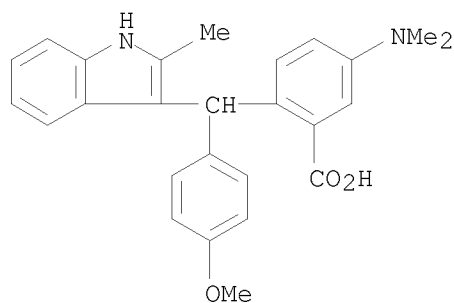
RN 62632-84-2 CAPLUS

CN Benzoic acid, 2-[(2,4-dimethoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]-5-(dimethylamino)- (CA INDEX NAME)

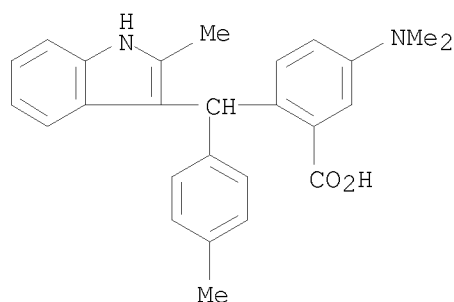


RN 66481-10-5 CAPLUS

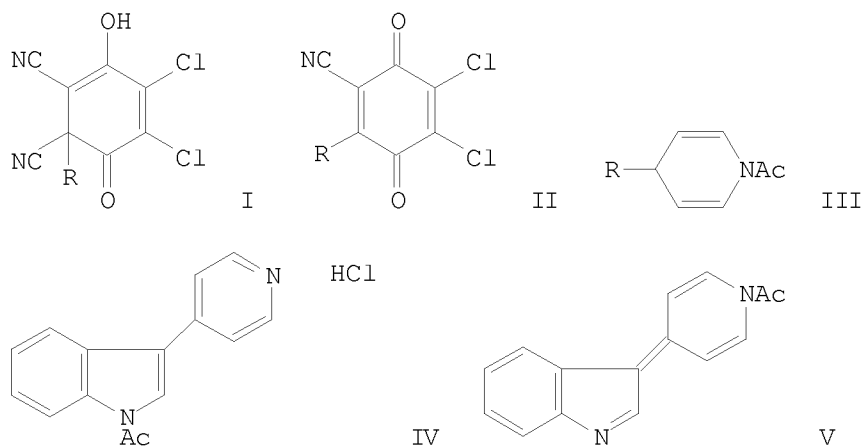
CN Benzoic acid, 5-(dimethylamino)-2-[(4-methoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]- (CA INDEX NAME)



RN 66481-11-6 CAPLUS
 CN Benzoic acid, 5-(dimethylamino)-2-[(2-methyl-1H-indol-3-yl)(4-methylphenyl)methyl]- (CA INDEX NAME)



L12 ANSWER 22 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1977:601235 CAPLUS <<LOGINID::20090930>>
 DOCUMENT NUMBER: 87:201235
 ORIGINAL REFERENCE NO.: 87:31855a,31858a
 TITLE: The reaction of some indoles and indolines with
 2,3-dichloro-5,6-dicyano-1,4-benzoquinone
 AUTHOR(S): Bergman, Jan; Carlsson, Rene; Misztal, Stanislaw
 CORPORATE SOURCE: Dep. Org. Chem., R. Inst. Technol., Stockholm, Swed.
 SOURCE: Acta Chemica Scandinavica, Series B: Organic
 Chemistry and Biochemistry (1976), B30(9), 853-62
 CODEN: ACBOCV; ISSN: 0302-4369
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 87:201235
 GI

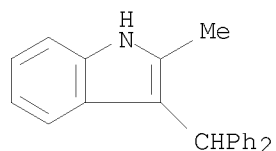


AB Indole and 2,3-dichloro-5,6-dicyano-1,4-benzoquinone (DDQ) form a 1:1 donor-acceptor complex, which was stable in the crystalline state in CH₂Cl₂. In dioxane the complex gave a substitution product (I, R = indol-3-yl), which on heating eliminated HCN to give the quinone II. 3-Alkylindoles and DDQ gave 3-alkylidene-3H-indoles. 3-(N-acetyl-1,4-dihydro-4-pyridyl)indole (III) was rearranged in the presence of N-acetylpyridinium chloride to 4-(N-acetyl-3-indolyl)pyridinium chloride (IV) presumably via the 3H-indole V, which was prepared by dehydrogenation of III under neutral conditions. 5-Iodo- and 5-acetamidoindole were prepared conveniently by dehydrogenation of the appropriate indolines with DDQ at 75° in dioxane.

IT 61995-46-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and dehydrogenation of)

RN 61995-46-8 CAPLUS

CN 1H-Indole, 3-(diphenylmethyl)-2-methyl- (CA INDEX NAME)

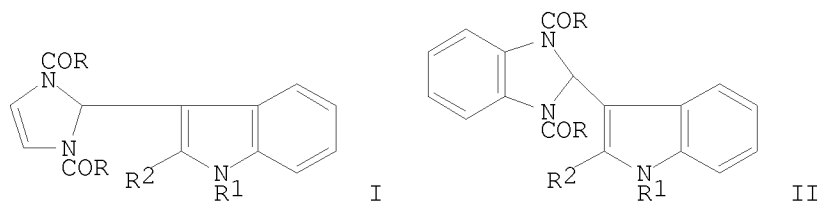


OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L12 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1977:439366 CAPLUS <<LOGINID::20090930>>
DOCUMENT NUMBER: 87:39366
ORIGINAL REFERENCE NO.: 87:6207a,6210a
TITLE: Imidazoles in a hetarylation reaction
AUTHOR(S): Sheinkman, A. K.; Stupnikova, T. V.; Klyuev, N. A.; Petrovskaya, L. Yu.; Zhil'nikov, V. G.
CORPORATE SOURCE: Donetsk. Gos. Univ., Donetsk, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1977), (2), 238-47

DOCUMENT TYPE:
LANGUAGE:
OTHER SOURCE(S):
GI

CODEN: KGSSAQ; ISSN: 0132-6244
Journal
Russian
CASREACT 87:39366

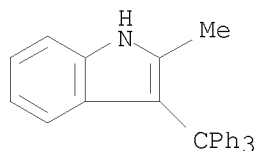


AB Indolylimidazoles I (R = Me, Ph, CHBrCHMe2 2-thienyl, 5-benzyl-5-furyl, R1, R2 = Me, H) and II (R = Me, R1, R2 = H, Me) were obtained in 7-95% yields by hetarylation of an indole derivative by an acylimidazole. Treatment of I and II with Ph3C+ClO4- gave 40.6-99% of the corresponding imidazolium perchlorates.

IT 63170-99-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 63170-99-0 CAPLUS

CN 1H-Indole, 2-methyl-3-(triphenylmethyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

L12 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1977:191335 CAPLUS <<LOGINID::20090930>>

DOCUMENT NUMBER: 86:191335

ORIGINAL REFERENCE NO.: 86:30019a,30022a

TITLE: Triarylmethane derivatives

INVENTOR(S): Kondo, Mitsuru; Yasui, Kiyoshi; Miyake, Makoto; Iwasaki, Hiroshi; Shiraishi, Tetsuo

PATENT ASSIGNEE(S): Kanzaki Paper Mfg. Co., Ltd., Japan

SOURCE: Ger. Offen., 77 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent

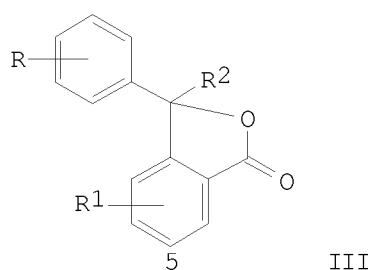
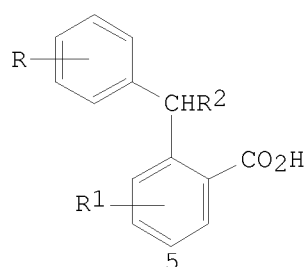
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| DE 2629937 | A1 | 19770203 | DE 1976-2629937 | 19760702 |

| | | | | |
|------------------------|------------------|----------|----------------|-------------|
| JP 52005746 | A | 19770117 | JP 1975-82898 | 19750703 |
| JP 56043065 | B | 19811008 | | |
| US 4045458 | A | 19770830 | US 1976-699584 | 19760624 |
| GB 1548672 | A | 19790718 | GB 1976-26630 | 19760625 |
| GB 1548673 | A | 19790718 | GB 1977-52806 | 19760625 |
| FR 2316215 | A1 | 19770128 | FR 1976-20400 | 19760702 |
| FR 2316215 | B1 | 19830617 | | |
| CH 627196 | A5 | 19811231 | CH 1976-8531 | 19760702 |
| US 4439610 | A | 19840327 | US 1977-774613 | 19770304 |
| US 4443614 | A | 19840417 | US 1980-162659 | 19800624 |
| PRIORITY APPLN. INFO.: | | | JP 1975-82898 | A 19750703 |
| | | | US 1976-699584 | A3 19760624 |
| | | | US 1977-774613 | A1 19770304 |
| OTHER SOURCE(S): | MARPAT 86:191335 | | | |
| GI | | | | |

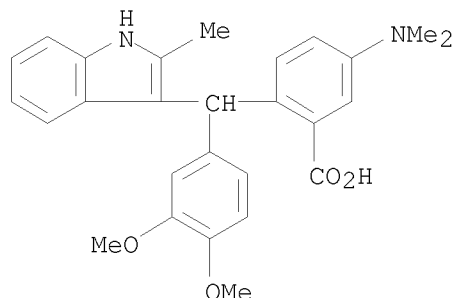


AB Colorless triarylmethanes I (R, R1 = H, halogen, NO2, alkyl, amino; R2 = substituted p-aminophenyl, substituted indol-3-yl) are prepared in high yield and purity by condensing 3-phenylphthalides (II) with arylamines or indoles in the presence of a Friedel-Crafts catalyst; oxidation of I, or condensation of II with the amines or indoles in the presence of an oxidizing Friedel-Crafts catalyst, give the corresponding III (R-R2 as defined). I and irradiated III form blue to black colors when in contact with silica gel. I (R = 4-Me2N, R1 = 5-Me2N, R2 = 2-methylindol-3-yl) [62633-36-7], III (R = 2-MeO, R1 = 5-Me2N, R2 = C6H4NMe2-4) [62633-37-8], and .apprx.60 other I and III are reported.

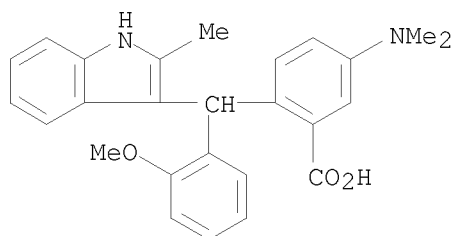
IT 62632-71-7P 62632-82-0P 62632-84-2P
62633-36-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and lactonization of)

RN 62632-71-7 CAPLUS

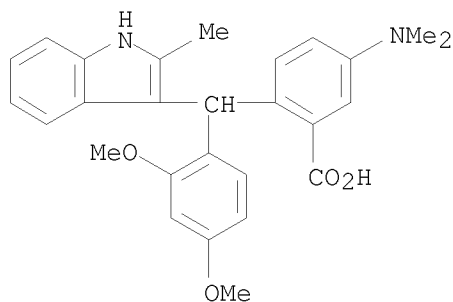
CN Benzoic acid, 2-[(3,4-dimethoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]-5-(dimethylamino)- (CA INDEX NAME)



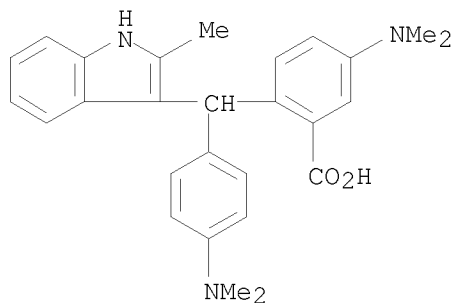
RN 62632-82-0 CAPLUS
CN Benzoic acid, 5-(dimethylamino)-2-[(2-methoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]- (CA INDEX NAME)



RN 62632-84-2 CAPLUS
CN Benzoic acid, 2-[(2,4-dimethoxyphenyl)(2-methyl-1H-indol-3-yl)methyl]-5-(dimethylamino)- (CA INDEX NAME)



RN 62633-36-7 CAPLUS
CN Benzoic acid, 5-(dimethylamino)-2-[[4-(dimethylamino)phenyl](2-methyl-1H-indol-3-yl)methyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

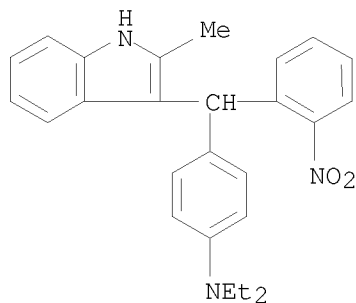
L12 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1975:74463 CAPLUS <<LOGINID::20090930>>
DOCUMENT NUMBER: 82:74463

ORIGINAL REFERENCE NO.: 82:11919a,11922a
 TITLE: Basic dyes
 INVENTOR(S): Psaar, Hubertus; Raue, Roderich
 PATENT ASSIGNEE(S): Bayer A.-G.
 SOURCE: Ger., 4 pp.
 CODEN: GWXXAW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------------|
| DE 1569750 | A | 19710121 | DE 1967-F52229 | 19670424 |
| DE 1569750 | B2 | 19740919 | | |
| CH 519552 | A | 19720229 | CH 1968-519552 | 19680312 |
| NL 6805656 | A | 19681025 | NL 1968-5656 | 19680422 |
| | | | DE 1967-F52229 | A 19670424 |

PRIORITY APPLN. INFO.:

GI For diagram(s), see printed CA Issue.
 AB Basic dyes (I, R = H, Me; R1 = Me, Ph; R2 = H, Cl; R3 = H, Et; R4 = Me, Et; R5 = H, NO2) were prepared and dyed acrylic fibers in fast green to blue shades. Thus, (1-methyl-2-phenyl-3-indolyl)[2-chloro-4-(diethylamino)phenyl]phenylmethane [25981-25-3] was dissolved in HOAc containing H2SO4, treated with PbO2, the PbSO4 removed, and salted to give basic dye I (R = Me, R1 = Ph; R2 = Cl, R3 = R4 = Et, R5 = H) [54117-54-3].
 IT 25981-18-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidation of, by ferric chloride)
 RN 25981-18-4 CAPLUS
 CN Benzenamine, N,N-diethyl-4-[(2-methyl-1H-indol-3-yl)(2-nitrophenyl)methyl]-
 (CA INDEX NAME)



L12 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1970:55248 CAPLUS <<LOGINID::20090930>>
 DOCUMENT NUMBER: 72:55248
 ORIGINAL REFERENCE NO.: 72:10105a
 TITLE: Methane derivatives with heterocyclic substituents
 PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.
 SOURCE: Fr., 15 pp.
 CODEN: FRXXAK
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| FR 1561663 | | 19690328 | FR | 19680412 |
| GB 1175931 | | | GB | |
| US 3637748 | | 19720125 | US | 19680405 |
| PRIORITY APPLN. INFO.: | | | DE | 19670414 |

GI For diagram(s), see printed CA Issue.

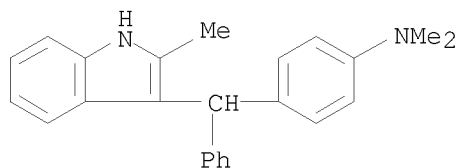
AB Methane derivs. with heterocyclic substituents free from sulfonic acid groups were prepared by reaction of a 3-CHBE-substituted indole (where B = a carbocyclic or heterocyclic group, and E is an easily eliminated radical) with compound containing active H (aminobenzenes, aminonaphthalenes, hydroxynaphthalenes, or pyrazole). Thus, 20.7 parts 1-methyl-2-phenylindole and 18.1 parts benzylideneaniline in 100 parts HCONMe₂ and 80 parts HOAc was kept 20 hr at 20-30° to give I, m. 175-6°. Approx. 35 other compds. were also prepared; they are useful as dye intermediates.

IT 25981-15-1P 25981-18-4P 25981-19-5P
25981-32-2P 25981-33-3P 25981-34-4P
25981-35-5P 25981-55-9P 25981-56-0P
26280-15-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

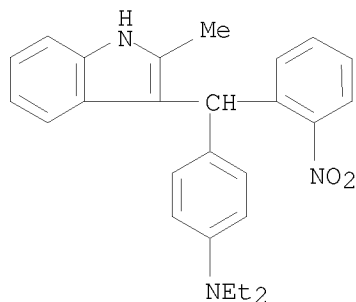
RN 25981-15-1 CAPLUS

CN Benzenamine, N,N-dimethyl-4-[(2-methyl-1H-indol-3-yl)phenylmethyl]- (CA INDEX NAME)



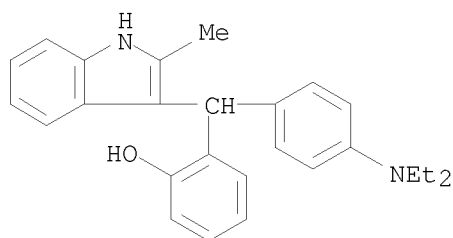
RN 25981-18-4 CAPLUS

CN Benzenamine, N,N-diethyl-4-[(2-methyl-1H-indol-3-yl)(2-nitrophenyl)methyl]- (CA INDEX NAME)

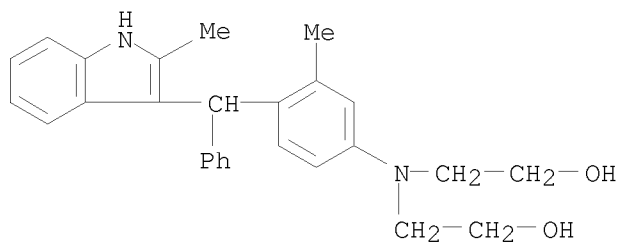


RN 25981-19-5 CAPLUS

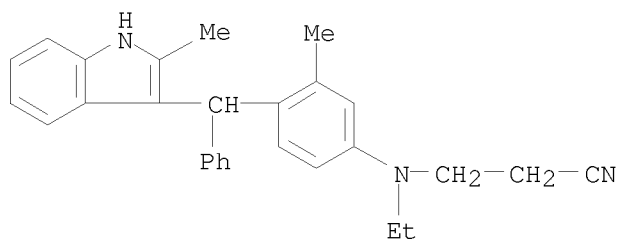
CN Phenol, 2-[[4-(diethylamino)phenyl](2-methyl-1H-indol-3-yl)methyl]- (CA INDEX NAME)



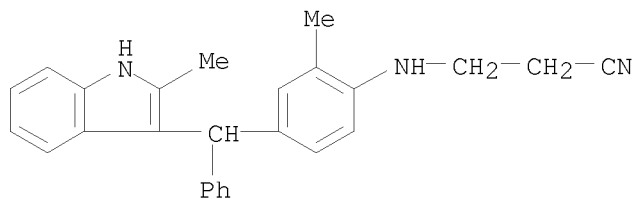
RN 25981-32-2 CAPLUS
 CN Ethanol, 2,2'-[[α4-(2-methylindol-3-yl)-α4-phenyl-3,4-xylyl]imino]di- (8CI) (CA INDEX NAME)



RN 25981-33-3 CAPLUS
 CN Propanenitrile, 3-[ethyl[3-methyl-4-[(2-methyl-1H-indol-3-yl)phenylmethyl]phenyl]amino]- (CA INDEX NAME)

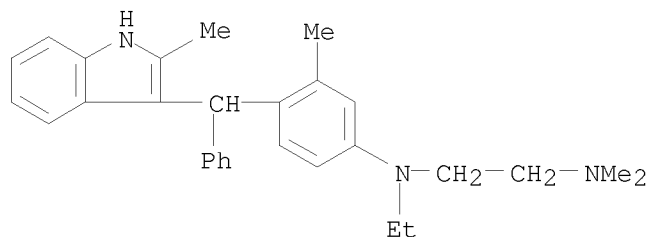


RN 25981-34-4 CAPLUS
 CN Propanenitrile, 3-[[2-methyl-4-[(2-methyl-1H-indol-3-yl)phenylmethyl]phenyl]amino]- (CA INDEX NAME)



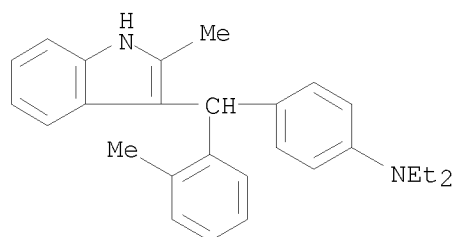
RN 25981-35-5 CAPLUS
 CN 1,2-Ethanediamine, N1-ethyl-N2,N2-dimethyl-N1-[3-methyl-4-[(2-methyl-1H-

indol-3-yl)methyl]phenyl]- (CA INDEX NAME)



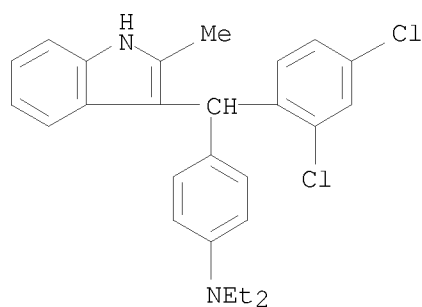
RN 25981-55-9 CAPLUS

CN Benzenamine, N,N-diethyl-4-[(2-methyl-1H-indol-3-yl)(2-methylphenyl)methyl]- (CA INDEX NAME)



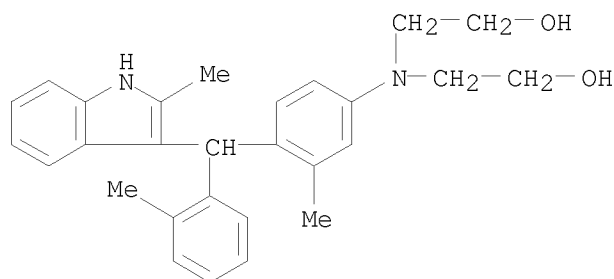
RN 25981-56-0 CAPLUS

CN Benzenamine, 4-[(2,4-dichlorophenyl)(2-methyl-1H-indol-3-yl)methyl]-N,N-diethyl- (CA INDEX NAME)



RN 26280-15-9 CAPLUS

CN Ethanol, 2,2'-[[α4-(2-methylindol-3-yl)-α4-o-tolyl-3,4-xylyl]imino]di- (8CI) (CA INDEX NAME)



L12 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1968:58856 CAPLUS <<LOGINID::20090930>>

DOCUMENT NUMBER: 68:58856

ORIGINAL REFERENCE NO.: 68:11359a,11362a

TITLE: Reaction of indolenine salts with nucleophiles

AUTHOR(S) : Huffman, Robert W.; Bruice, Thomas C.

CORPORATE SOURCE: Univ. of California, Santa Barbara, CA, USA

SOURCE: Journal of the American Chemical Society (1967),
89(24), 6243-51

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

GI For diagram(s), see printed CA Issue.

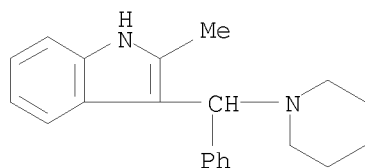
AB The suggestion that an indolenine moiety is an intermediate in the mechanism of action of the dehydrogenase enzymes led to a study of the reduction of substituted phenylindolenine hydrosulfates by diethyl 2,6-dimethyl-1,4-dihydropyridyl-3,5-dicarboxylate (Hantzsch ester). These reactions affording 3,5-dicarbethoxy-2,6-dimethylpyridinium hydrosulfate and the corresponding 3-benzylindole as products were first order with respect to each reactant with rate consts. 500 times greater in MeCN than in EtOH. The extinction coefficient of the visible band of the indolenine salts undergoes a 100-fold parallel change in these solvents. These effects were interpreted as being due to tighter solvation of the indolenine salt by EtOH as compared to MeCN. The presence of intermediate charge transfer complexes could not be determined because of the magnitude of the rate consts. The inclusion of radical inhibitors in the reaction solns. had no effect on the rate of the reaction. The reaction of the phenylindolenine salts with secondary amines gave the corresponding adducts (I), although the N.M.R. spectrum of the imidazole adduct does not seem to be consistent with this structure. Kinetic studies of the reaction of the indolenine salts with secondary amines showed the reactions to be complex. In contrast the reaction of secondary amines with the phenyl N-methylindolenine salt was simple first-order with respect to each reactant with rate consts. comparable to reduction by the Hantzsch ester. The complexity of the reaction with the pyenylindolenine salt is attributed to acid-base equilibrium between the protonated indolenine (protonated imine) and the amine. By comparison of the rate consts. for the reaction of the unprotonated phenylindolenine salt with aziridine and morpholine with the consts. for the reaction of the phenyl N-methyl analog with these amines, it is concluded that protonation increases the reaction rate 12,000-fold. These phenomena are discussed with references to the dehydrogenase enzyme.

IT 19006-18-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 19006-18-9 CAPLUS

CN 1H-Indole, 2-methyl-3-(phenyl-1-piperidinylmethyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

L12 ANSWER 28 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1961:137421 CAPLUS <<LOGINID::20090930>>

DOCUMENT NUMBER: 55:137421

ORIGINAL REFERENCE NO.: 55:25911d-h

TITLE: Picrylation and analogous electrophilic substitutions.
II. Indoles and indolizines

AUTHOR(S): Treibs, Wilhelm; Wahren, Manfred

CORPORATE SOURCE: Univ. Leipzig, Germany

SOURCE: Chemische Berichte (1961), 94, 2142-8

CODEN: CHBEAM; ISSN: 0009-2940

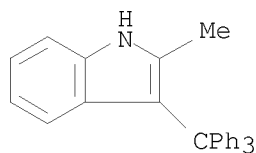
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 55:137421

AB cf. CA 55, 22264h. Indoles and N-alkylindoles were substituted (in the absence of catalyst) in the 3-position by picryl halides; pyrrocolines (indolizines) underwent substitution in the 1-position even more readily. Indoles reacted analogously with Ph₃CCl (I). The tritylindoles were colorless, but picryl-substitution of azulenes shifted the main band in the visible region hypsochromically; with indoles and pyrrocolines however, the shift was bathochromic, because of the participation of polar structures in the mesomerism. Picrylindolizines were converted by the method of Vilsmeier into aldehydes. 2-Methylindole and picryl chloride (II) (equimolar amts.) in concentrated PhMe solns. were mixed to give an adduct, yellow-orange needles, m. 114°. 3-Methylindole and II gave an adduct, orange-red needles, m. 106-7° (PhMe). 1-Methylindole (2.6 g.) and 5.6 g. I in 60 cc. PhMe or xylene refluxed 4-6 hrs., cooled, filtered through 10 cc. Al₂O₃, and concentrated gave the 3-Ph₃C derivative 2-Methylindole (2.6 g.) gave the 3-Ph₃C derivative The appropriate pyrrocoline (0.02 mole) in 50 cc. PhMe treated at 80-100° with a stream of N and with 5 g. I in 50 cc. PhMe and the mixture refluxed 0.5-2 hrs., decanted hot, cooled, filtered through Al₂O₃, and evaporated gave the corresponding picrylindolizine; in this manner were prepared the following compds. (% yield and m.p. given): 1-picrylindolizine (III) 75, 163° (corrected); 2-Me derivative (IV) of III, 65, 150° (corrected); 2,3-di-Me derivative (V) of III, 62, 226-7° (corrected); 2-Ph derivative (VI) of III, 80, 148-9°. IV (10 g.) in 200 cc. HCONMe₂ treated with cooling with 20 cc. PCl₃, the mixture kept 2 hrs. at room temperature, poured into 2.5 l. 5% aqueous Na₂CO₃, and filtered, and the residue dissolved in boiling EtOAc, diluted with an equal volume EtOH, and cooled gave 90% 3-CHO derivative (VII) of IV, m. about 246° (decomposition) (corrected). VII (3.7 g.) in alc. C₅H₅N treated with N and 1.2 g. NH₂OH.HCl, kept 24 hrs., poured into H₂O, and filtered gave 80% oxime of VII, blue needles, m. 217° (decomposition) (corrected). III, IV, V, and VI were soluble in 35% HCl and 80% H₃PO₄ and could be reprecipitated unchanged by dilution with H₂O. V and VII were more basic than the other

picrylindoles.
 IT 63170-99-0P, Indole, 2-methyl-3-trityl-
 RL: PREP (Preparation)
 (preparation of)
 RN 63170-99-0 CAPLUS
 CN 1H-Indole, 2-methyl-3-(triphenylmethyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
 (2 CITINGS)

L12 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1960:34210 CAPLUS <<LOGINID::20090930>>
 DOCUMENT NUMBER: 54:34210
 ORIGINAL REFERENCE NO.: 54:6686h-i,6687a-g
 TITLE: Reactions of optically active indole Mannich bases
 AUTHOR(S): Albright, J. D.; Snyder, H. R.
 CORPORATE SOURCE: Univ. of Illinois, Urbana
 SOURCE: Journal of the American Chemical Society (1959), 81,
 2239-45
 CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

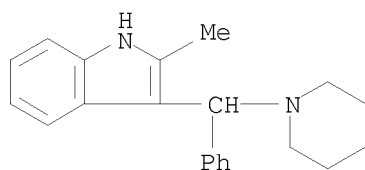
AB Alkylation of (EtO₂C)₂CH₂ (I) and (EtO₂C)₂CHNHAc (II) with optically active 3-(isopropylaminoethylidene)indole (III) yields racemic di-Et (3-indolylethylidene)malonate (IV) and racemic di-Et (3-indolylethylidene)acetamidomalonate (V), resp. Optically active 1-methyl-3-(dimethylaminoethylidene)indole (VI) reacts with II to form racemic di-Et (3-N-methylindolylethylidene)acetamidomalonate (VIII). Thus, III, [α]_D²⁶ (CHCl₃) from 32 to 35°, was prepared by resolution of racemic III with dibenzoyl (+)-tartaric acid. PhMe (50 ml.), 8.01 g. I and 0.1 g. Na was heated at 85-90° under N, stirred 1.5 hrs., 10.11 g. III added and after 5 hrs. the mixture poured into 25 ml. H₂O, the organic layer separated, the aqueous layer extracted with 3-50 ml. portions of Et₂O, the combined exts. dried (Na₂SO₄) and the solvent removed in vacuo. The residual red oil was dissolved in EtOH and decolorized, EtOH removed, high-boiling petr. ether added and on cooling approx. a week, 66% crude crystals were obtained; recrystn. (petr. ether: EtOH, 60:40) gave IV, m. 64.5-5.5°. Similarly, II reacted with III, [α]_D^{27.5} (CHCl₃) -39°, to give 67% V. III reacted with C₅H₁₁N (VIII) to form 60.4% racemic 3-(piperidinoethylidene)indole (IX). IX was prepared independently as follows: indole (23.4 g.) was dissolved in 150 ml. glacial HOAc and cooled in ice-salt bath, 17 g. VIII in 10 ml. C₆H₆ added, then 9.7 g. AcH in 50 ml. C₆H₆ added dropwise over 10-15 min., the mixture cooled 4 days at 0°, poured into 150 ml. Et₂O and 800 ml. ice-H₂O, Et₂O layer extracted with KHSO₄, the combined aqueous exts. washed with Et₂O and made basic with 10N NaOH. The oil which separated was removed by Et₂O extraction, the Et₂O exts. dried (Na₂SO₄), the solvent removed in vacuo, 25 ml. methylcyclohexane added, and the mixture cooled at 5° several days to give 49.5% IX, m. 99.5-101°; IX.HCl m. 165-70° (decomposition). 3-(Morpholinoethylidene)indole, m. 115-18°, was obtained in 85%

crude yield from III and C₄H₉NO. A mixture of MeOH, NaOMe and III was cooled in an ice-salt bath, MeI added, the mixture allowed to stand 31 hrs. in an N atmospheric, extracted with Et₂O to give a mixture of racemic 3-(methoxyethylidene)indole (X) and III; this was separated by fractional crystallization from Et₂O-methylcyclohexane, yield of X, 15%. X was also prepared from 3-(dimethylaminoethylidene)indole (XI), MeOH, NaOMe and MeI, yield 93%, m. 78-9°. 3-(Ethoxy-ethylidene)indole (XII), m. 95-7.5° and 3-(isopropoxyethylidene)indole, m. 94-6°, were similarly prepared from XI. I and excess Na reacted with 2-methyl-3-benzylidene-3H-pseudoindole H₂SO₄ salt (XIII) in an N atmospheric to give 59% di-Et (2-methyl-3-indolylbenzylidene)malonate, m. 145-6°. Similarly, EtOH and XIII gave 80% 2-methyl-3-(ethoxybenzylidene)indole, m. 122-3°, while VIII and XIII formed 89% 2-methyl-3-(piperidinobenzylidene)indole, m. 136-7°. IX.HCl (59.4%) was obtained by reaction of VIII with XII in presence of NaOMe. 3-(Methoxymethyl)indole, VIII, and NaOMe gave 67.8% 3-(piperidinomethyl)indole, m. 156-8°. Racemic VI was prepared in 47.2% yield from N-methylindole, Me₂NH.HCl and K₂CO₃ in glacial HOAcEtCO₂H to which was added AcH in C₆H₆. VI was resolved with dibenzoyl (+)-tartaric acid to give optically active VI, [α]_D²⁶ (CHCl₃) -7.3°. (±)VI or (+)VI reacted with II and NaOEt in an N atmospheric, in the presence of Me₂SO₄ to give 60.5-64% VII, m. 186-7°. VII refluxed 3 hrs. with 2N NaOH, the mixture acidified with HCl to form a slightly impure product which was heated 5 hrs. in C₅H₅N at 95°, gave 2-acetamido-3-(3-N-methylindolyl)butyric acid, (XIV), m. 219-20°. XIV (0.24 g.) refluxed 24 hrs. with 2 ml. 10N NaOH and 3 ml. H₂O, the mixture neutralized with glacial HOAc, gave 0.2 g. 2-amino-3-(3-methylindolyl)butyric acid, m. 206-8° (decomposition). A preliminary kinetic study of the reaction of III with I was described. The results were consistent with the formation of the intermediate 3H-pseudoindole

IT 19006-18-9P, Indole, 2-methyl-3-α-piperidinobenzyl-
 RL: PREP (Preparation)
 (preparation of)

RN 19006-18-9 CAPLUS

CN 1H-Indole, 2-methyl-3-(phenyl-1-piperidinylmethyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
 (4 CITINGS)

L12 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1956:51867 CAPLUS <<LOGINID::20090930>>

DOCUMENT NUMBER: 50:51867

ORIGINAL REFERENCE NO.: 50:9909f-h

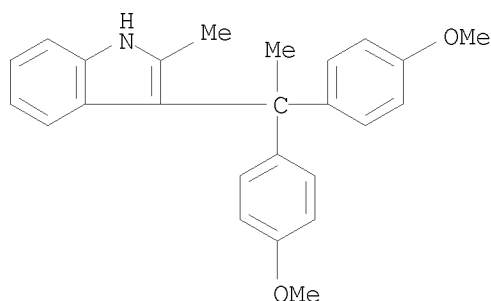
TITLE: Triphenylmethane dyes

AUTHOR(S): Roosens, L.

CORPORATE SOURCE: S. A. Photo-Produits Gevaert, Mortsel

SOURCE: Compt. rend. 27e Congr. intern. chim. ind., Brussels, 1954 (1955), Volume Date 1954 3
 From: Industrie chim. belge 20, Spec No., 641-4

DOCUMENT TYPE: Journal
 LANGUAGE: French
 AB Derivs. of 4,4'-dimethoxydiphenylmethane in which the central C atom carries a heterocyclic substituent were prepared. Substituents included the radicals from pyridine, quinoline, 2-methylindole, carbazole, benzothiazole, benzoselenazole, phenothiazine, phenoxazine, phenoselenazine, and sulfonyldiphenylamine. Spectrophotometric absorption curves were determined for acid solns. of the dyes, and the results are discussed in terms of the theories of Lewis and Calvin (C.A. 34, 671.7), Pauling (C.A. 34, 887.8), Branch, et al. (C.A. 39, 5175.3), and Brunings and Corwin (C.A. 38, 2032.7). Several of these dyes would be suitable as filter and antihalation layers for photographic materials. 26 references.
 IT 854829-94-0, Carbonium, [bis(p-methoxyphenyl)(2-methyl-3-indolyl)methyl]-, chloride (spectrum of)
 RN 854829-94-0 CAPLUS
 CN 1H-Indole, 3-[1,1-bis(4-methoxyphenyl)ethyl]-2-methyl-, chloride (1:1) (CA INDEX NAME)



● Cl⁻

L12 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1927:1933 CAPLUS <<LOGINID::20090930>>
 DOCUMENT NUMBER: 21:1933
 ORIGINAL REFERENCE NO.: 21:243c-i,244a-i,245a-c
 TITLE: Oxidation products of various pyrrolic compounds
 AUTHOR(S): Pieroni, Antonio; Veremeenco, Pietro
 SOURCE: Gazzetta Chimica Italiana (1926), 56, 455-79
 CODEN: GCITA9; ISSN: 0016-5603
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 GI For diagram(s), see printed CA Issue.
 AB Though the constitution of melanine has never been established, there are indications that it is an oxidation-condensation product of pyrrolic nuclei (cf. Rondoni, Biochimica 1925, 256). For this reason various derivs. and oxidation products of pyrrole (I) were studied in the hope of obtaining facts of aid in determining the constitution of melanin (cf. C. A. 16, 2337), and therefore of biochem. importance. Oxidation yielded not single compds., but sirupy mixts. which instead of crystallizing formed vitreous masses. The pyrrole ring underwent a perhydrolytic process, in most cases splitting and forming keto acids or their derivs. Diethyl diacetylsuccinate (II) (5 g.) heated 4 hrs. at 100° with iso-AmNH₂

(1.7 g.) in HOAc (15 cc.), poured into cold water, the precipitate washed with water and dried in air gives almost 100% of Et isoamyl- α,α' -dimethylpyrroldicarboxylate, $\text{MeC:C(CO}_2\text{Et)C(CO}_2\text{Et)}$: $\text{CMeNCH}_2\text{CH}_2\text{CHMe}_2$, m. $61-2^\circ$, saponified by aqueous KOH to isoamyl- α,α' -dimethylpyrroldicarboxylic acid, $\text{MeC:C(CO}_2\text{H)C(CO}_2\text{H)}$: $\text{CMeNC}_5\text{H}_{11}$, m. 219° , decomposed by hot HOAc with formation of a red precipitate. The acid yields on distillation N-isoamyl- α,α' -dimethylpyrrole (III), oil, b 7.75 $219-21^\circ$, terpene odor, darkens slowly in air, gives the pyrrole pine-splinter test. Tetraphenylpyrrole, prepared by the method of Robinson and Robinson (C. A. 12, 2313), m. $221-2^\circ$, does not give the pine-splinter test. I (2.95 g.), HOAc (29.5 g.) and Ph_3COH (11.28 g.) refluxed together yield pyrrolyltriphenylmethane (IV), m. 253° (cf. Khotinsky and Patzewitch, C. A. 3, 2948). III and Ph_3COH refluxed a few min. yield isoamyl- α,α' -dimethylpyrrolyltriphenylmethane, m. 183° , gives a positive pine-splinter test. Similarly α -methylindole and Ph_3COH give α -methylindyltriphenylmethane, $\text{C}_5\text{H}_4\text{C(CPh}_3\text{):CMeNH}$, m. 180° , and diphenylpyrrole and Ph_3COH give α,α' -diphenylpyrrolyltriphenylmethane. Distillation of the acid obtained by saponification of the ether from the interaction of H_2NNH_2 and II

in

HOAc gives the compound $[\text{MeC:CH:CH:CMe.N}]_2$, m. 62° , camphor-like odor. α,β -Dimethylpyrrole (V) (2.8 g.) let stand 4 days with HOAc (28 cc.) and H_2O_2 (7 g.) evaporated, a little more H_2O_2 added, diluted

with

water, reevapd. times enough to eliminate all AcOOH , let stand until crystallized, washed with water and dried, yields a crystalline compound which

after

prolonged heating in C_6H_6 ppts. as $\text{C}_{12}\text{H}_{20}\text{-O}_5\text{N}_2$ (VI), m. 171° (decomposition), cannot be benzoylated, its water suspension gives with KOH and I a precipitate of CHI_3 , with evolution of NH_3 indicating the presence of an Ac group. The filtrate from CHI_2 acidified with H_2SO_4 , decolorized with Na_2SO_3 and extracted with Et_2O , yields an oil with acid reaction and rancid odor. VI reduces $\text{NH}_3\text{-AgNO}_3$, gives no color with alkaline aqueous Na nitroprussiate, does not react with KNO_2 in HOAc, gives no precipitate with PhHNNH_2 in dilute HOAc, does not give an Ac derivative with Ac_2O does not

react

with quinone in HOAc, let stand 1 day in dilute EtOH with semicarbazide-HCl and excess NaOAc, and evaporated it yields a crystalline compound containing 47.01% N, m.

260° (decomposition) and with all the properties of $(\text{H}_2\text{NOCNH-})_2$. When heated VI evolves white fumes which do not give a positive pine-splinter test, but at a higher temperature it chars and evolves a vapor which gives a positive test, and which has the odor of levulinic or pyruvic acid. Heated with excess dry NaOH, VI evolves NH_3 , and subsequently white fumes which give a positive pine-splinter test. VI also gives the pyrrole reaction with $p\text{-Me}_2\text{NC}_6\text{H}_4\text{CHO}$ in dilute EtOH. When oxidized with AcOOH , V gives besides VI a sirup (VII) which can be separated from VI by its extreme solubility in water. Oxidized with KMnO_4 in KOH solution, VII evolves NH_3 and when filtered, concentrated, diluted, refiltered, acidified with H_2SO_4 ,

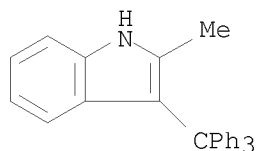
extracted with

Et_2O yields $(\text{CO}_2\text{H})_2$ and a brown oil (VIII) with pungent odor. Heated with NaOH and As_2O_3 , VIII gives the cacodyl oxide reaction, indicating the presence of the Ac group. It also contains a high amount of an acidic, non-crystalline substance which gives the CHI_3 reaction but does not reduce $\text{NH}_2\text{-AgNO}_3$. In dilute HOAc and with $\text{PhHNNH}_3\text{OAc}$, VI or VII gives the compound $\text{PhHNNHCOCHMeCH}_2\text{CMe:NNHPh}$, m. 183° . Hydrolysis of VI or VII with hot dilute NaOH, acidification with HOAc and addition of PhHNNH_2 ppts. the compound $\text{MeC(:NNHPh)CH}_2\text{CHMeCO}_2\text{H}$, bright yellow, m. $133-5^\circ$ (cf. Gazz. chim. ital. 21, ii, 28(1891)), very unstable. The results show that by the deep oxidation of V, derivs. of $\text{MeCOCH}_2\text{CHMeCO}_2\text{H}$ are formed which in

turn hydrolyze to the latter. VI probably has the composition $[\text{MeC}(\text{OH})\text{NH}_2\text{CH}_2\text{CHMeCO}]_{20}$. α, α -Dimethylpyrrole (IX) (2 g.) and H_2O_2 (10 cc.) let stand 1 day, followed by the addition of more H_2O_2 and HOAc (10 cc.), let stand 25 days, more H_2O_2 added, evaporated, washed with water, oxidized a 3rd time with AcOOH , and evaporated, yields a yellow sirup which quickly turns brown. Reheating the oxidation with IX (1 g.), HOAc (10 g.) and H_2O_2 (2.5 cc.) first cooling 1 hr. in ice, then letting stand at room temperature 15 days, with occasional addition of more H_2O_2 and evaporating leaves a sirup, similar to VII. Hydrolyzed with excess boiling dilute KOH , NH_3 is evolved and a dark brown liquid formed which (1) acidified with HOAc gives no precipitate with PhHNNH_2 , (2) with I gives CHI_3 , (3) acidified with H_2SO_4 , and extracted with Et_2O yields an oil extract with an odor of rancid fats, forming CHI_3 with KOH and I, not reacting with PhHNNH_2 : or with $\text{H}_2\text{NCONHNH}_2$, and (4) let stand in air forms an unidentified crystalline compound α, α -Diphenylpyrrole (1 g.), HOAc (15 cc.) and H_2O_2 (2.5 g.), let stand 24 hrs., more H_2O_2 added and evaporated gives PhMeCO and BzOH . Triphenylpyrrylmethane (X) (1 g.), HOAc (20 cc.) and H_2O_2 , (2.5 g.) heated at 90 - 100° , yield Ph_2CO and $\text{Ph}_3\text{CCO}_2\text{H}$. With the latter also crystalline a compound, m. 290° with properties like those of $\text{Ph}_3\text{CCO}_2\text{H}$, leaving a brown sirup. The latter with hot dilute NaOH precipitated when acidified with dilute H_2SO_4 a compound similar to that from the oxidation of pyrrole black with H_2O_2 , and $(\text{HO}_2\text{-CCH}_2\text{-})_2$ remained in the filtrate. Acetylpyrrole, HOAc and H_2O_2 let stand some days turned to a yellow solution, whereas I, HOAc and H_2O_2 become brown or olive-green, with separation of a pyrrole black. Pyrrolicarboxylic acids are not attacked by HOAc at room temperature, but at 40° oxidation begins and at higher temps. is rapid, and when hot even HOAc decamps. them. Thus α, α' -dimethylpyrrolicarboxylic acid (XI) yields the corresponding N-Ph derivative N-Phenyl- α, α' -dimethylpyrrole (0.35 g.) and quinone (1.05 g.) in HOAc let stand 48 hrs. ppts. quinhydrone, leaving a filtrate which, diluted with water and a trace of Na_2CO_3 added, forms a colloidal precipitate The latter filtered, washed for 15 days, dried, extracted with EtOH , the residue extracted with Et_2O , left a new residue of the compound $\text{C}_{24}\text{H}_{17}\text{O}_4\text{N}$ (Rend. accad. Lincei 30, 319(1921)), and probably black, amorphous, soluble in alkalies and precipitated on acidification. III (0.7 g.) and quinone (0.2 g.) in HOAc let stand 48 hrs. ppts. quinhydrone, leaving a filtrate which, greatly diluted with water, evaporated gave a colloidal precipitate The latter filtered, washed 4 days, dried and extracted with Et_2O , gives the compound $\text{C}_{22}\text{H}_{23}\text{O}_4\text{N}$ and probably of the same constitution as the preceding compound with an iso-Am group instead of a Ph group. Oxidation of pyrrole blacks forms primarily amorphous acidic products which differ from the unoxidized products by their solubility in KOH and their brown color. Oxidized further with alkaline KMnO_4 they yield $(\text{CO}_2\text{H})_2$ and a substance which reacts with p-chlorophenylazoxycarboxamide (XII) to form dark red products which with concentrated H_2SO_4 . give an intense blue color characteristic of bisazophenylpyrroles. This shows that, in the decomposition of pyrrole blacks, pyrrolicarboxylic acids are formed and that in the blacks the condensation of the nuclei is between C atoms. There. fore tetrasubstituted pyrroles ($\alpha, \alpha', \beta, \beta'$) do not form dark colored oxidation products. Deep oxidation of pyrrole blacks with HOAc yields yellow sirups which darken when evapd, in air like the oxidation products of IX, and which on hydrolysis with KOH form $(\text{HO}_2\text{CCH}_2)_2$ and small amts. of other acids which with phHNNH_2 precipitate a compound, m. 186 - 7° . Further study of the influence of substituents in I on the formation of brown oxidation products showed that with radicals such as Bz

and CO₂H in the α -position no dark colored products are formed. Since PhNH₂ oxidizes to aniline black and thence to quinone and I to pyrrole black and thence to maleinimide (XIII), it was considered that possibly a further analogy might hold the XIII form a black compound with I as does quinone. I and XIII failed, however, to form such a product. Likewise, though quinone and hydroquinol form a black product; no analogous condensation product of XIII and hydroquinol was obtained. The influence of the substituents in I on the ability of the derivs. to react with XII was also studied. III, X and XI in alc. KOH react with XII, where N-phenyldimethylpyrroledicarboxylic acid, N-isoamyldimethylpyrroledicarboxylic acid, tetraphenylpyrrole and triphenyl-N-isoamyl- α,α' -dimethylpyrrylmethane did not react with XII. Unlike the primary oxidation products of pyrrole, those of the substituted pyrroles were reddish brown without the separation of black substances (cf. C. A. 17, 2578; 18, 1293), indicating the destruction of the pyrrole nucleus in the substituted pyrroles. In cases like IX where blackish products are formed, the pyrrole nucleus does not split up, even after deep oxidation, or else it is reformed. The oxidation products obtained from the various derivs. of I give good indications of the way in which the nucleus splits.

IT 63170-99-0P, Indole, 2-methyl-3-triphenylmethyl-
 RL: PREP (Preparation)
 (preparation of)
 RN 63170-99-0 CAPLUS
 CN 1H-Indole, 2-methyl-3-(triphenylmethyl)- (CA INDEX NAME)



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